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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/961,147	09/24/2001	Takushi Fujita	1573.1007	5366

21171 7590 10/07/2005	EXAMINER
STAAS & HALSEY LLP	VU, THANH T

SUITE 700	ART UNIT	PAPER NUMBER
1201 NEW YORK AVENUE, N.W.	---	---
WASHINGTON, DC 20005	2174	

DATE MAILED: 10/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	09/961,147	FUJITA ET AL.
	Examiner	Art Unit	
	Thanh T. Vu	2174	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on _07 July 2005_.

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) _1-26_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) _1-26_ is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All   b) ☐ Some * c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

This communication is responsive to Amendment, filed 07/07/2005.

Claims 1-26 are pending in this application. In the Amendment, claims 1, 2, 4, 5, 7, 9, 12,

15, 18, 19, 21, 23, 25 and 26 were amended.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

Claims 1-4, 6-8, 10-11, 13-18, 20-22 and 24-25 are rejected under 35 U.S.C. 103(a) as

being unpatentable over Robertson et al. ("Robertson", US 6,486,895) and Ishida (U.S. Pat. No.

5,684,969).

As per claim 1, Robertson teaches an information processing apparatus for displaying a

an information object in a virtual space according to visual field data, where the information

object represents one or more respective content items of content type, and where said visual

field data defines a visual field in said virtual space, said apparatus comprising:

holding means for holding, in an executable manner, a plurality of intermediate data

generating means specific to said respective content items of different content types of

information object for generating respective pieces of intermediate data specific to a content type

of a particular content item of the information object, said generated piece of intermediate data

comprising at least either of texture data and display form defining data, (figs. 2 and 15, step

202, *generate page objects for each web page*, col.5, lines 50-52; fig 3, textual data 302 and

303), and for holding, in an executable manner a plurality of different display image generating

means specific to said respective content items of different content types of the information

object for generating respective display images from said respective generated pieces of

intermediate data (figs. 2 and 15, step 204, *render and display*, col.5, lines 57-58);

Robertson does not teach first means for causing said plurality of intermediate data

generating means to generate the respective pieces of intermediate data for displaying a

particular content item of the information object, when determined according to a geometric

relation between said visual filed and said information object to generate said respective pieces

of intermediate data of said particular content item of the information object; a memory for

storing the generated pieces of intermediate data for rendering a display image; and second

means for causing said plurality of different display image generating means to generate display

images of said particular content item of the information object from said respective generated

pieces of intermediate data to render the display image on a display memory region, when

determined according to a geometric relation between said visual filed and said particular

information object to display said particular content item of the information object. However,

Ishida teaches first means for causing said plurality of intermediate data generating means to

generate the respective pieces of intermediate data for displaying a particular content item of the

information object, when determined according to a geometric relation between said visual filed

and said information object to generate said respective pieces of intermediate data of said

particular content item of the information object (figs 9a-9g; col. 4, lines 1-8; col. 5, lines 5-31;

col. 6, lines 8-22); a memory for storing the generated pieces of intermediate data for rendering

a display image (figs 1a and 1b; col. 7, lines 10-21 and lines 39-49); and second means for

causing said plurality of different display image generating means to generate display images of

said particular content item of the information object from said respective generated pieces of

intermediate data to render the display image on a display memory region, when determined

according to a geometric relation between said visual filed and said particular information object

to display said particular content item of the information object (figs 9a-9g; col. 4, lines 1-8; col.

5, lines 5-31; col. 6, lines 8-22). Therefore, it would have been obvious to one of ordinary skill

in the art at the time of the invention to include the teaching of Ishida in the invention of

Robertson in order to display the detailed information and the general information in a single

display area.

As per claim 2, Robertson teaches the information processing apparatus according to

claim 1 wherein each intermediate data generating means and each display image generating

means operate asynchronously with each other for a respective content type of a particular

content item of information object (FIG.2, col.5, lines 38-65, *generating and displaying*).

As per claim 3, Robertson teaches the information processing apparatus according to

claim 1 wherein each intermediate data generating means operates under control of said first

means, to generate and renew pieces of intermediate data for displaying a particular information

object, and each display image generating means operates simultaneously with each respective

intermediate data generating means for the particular information object under control of said

second means, to generate a display image of the particular information object from said

generated and renewed intermediate pieces of intermediate data (FIG.9, col.8, lines 31-39

graphical object control) .

As per claim 4, Robertson teaches the information processing apparatus according to claim 1 wherein said holding means holds a plurality of information object content type specific data processing means, each information object content type specific data processing means including at least intermediate data generating means for generating intermediate data of a particular content type of a particular content item of an information object and display image generating means for generating a display image for the piece of intermediate dat of the particular content type of the particular content item of the information object (FIG.9, *content part*, col.8, lines 40-48).

As per claim 6, Robertson teaches the information processing apparatus according to claim 1 wherein each intermediate data generating means is implemented as program codes, and each display image generating means is implemented as program codes; and said apparatus further comprises data capturing means for capturing said intermediate data generating program codes and said display image generating program codes into said holding means from an external device or a communication line (col.13 line 10- col.14, line 7, *program code instructions*).

As per claim 7, Robertson teaches the information processing apparatus according to claim 1 further comprising: visual field data managing means for smoothly changing said visual field data according to an input command and display means for displaying the generated display images of said particular content item of the information object (Figs. 1 and 6; col.4, lines 50-52; col.7, lines 41-46.

As per claim 8, Robertson teaches the information processing apparatus according to claim 1 further comprising: means for assigning a display priority to each of said plurality of

information objects (col.7, lines 37-60, *display priority indicated by page sequence*); said first

means comparing said display priority of a particular information object with a predetermined

threshold to thereby determine to generate a piece of the intermediate data of said particular

information object; said second means comparing said display priority of said particular

information object with a predetermined threshold to thereby determine whether to generate a

display image of said particular information object (col.5, lines 12-21, *predetermined context*

dependent).

As per claim 10, Ishida teaches the information processing apparatus according to claim 1

wherein each display image generating means determines a form in which a generated display

image is displayed, according to the geometric relation between said visual field and said

particular information object (figs 9a-9g; col. 4, lines 1-8; col. 5, lines 5-31; col. 6, lines 8-22).

As per claim 11, Robertson teaches the information processing apparatus according to

claim 1 wherein display priorities are assigned to respective ones of said plurality of information

objects, and when a display image of a particular information object is to be displayed,

corresponding one of display image generating means determines a form in which said display

image of said particular information object is to be displayed, in accordance with the display

priority of said particular information object (col.7, lines 37-60, *display priority indicated by*

page sequence).

As per claim 13, Robertson teaches the information processing apparatus according to

claim 1 further comprising: third means for selecting one of said plurality of information objects

as a representative object and defining said visual field by defining a geometric relation of said

representative object to said visual field, said third means altering said representative object,

without changing the geometric relations of said plurality of information objects to said visual

field, as said visual field shifts in said virtual space (col5, lines 50-65, *page object is*

representation) ; said first means traversing linkages between said plurality of information

objects, starting with said representative object, to thereby determine whether to generate a piece

of intermediate data of a particular information object (col.5, line 66-col.6, line 8, *traverses page*

objects).

As per claim 14, Robertson teaches the information processing apparatus according to

claim 14 wherein display priorities are assigned to respective ones of a plurality of information

objects, and said third means selects one of said plurality of information objects having a highest

display priority as said representative object (col.7, lines 37-60, *display priority indicated by*

page sequence).

Claims 15-18, 20-22 and 24 are similar in scope to claims 1-4, 8-9, 11 and 13

respectively, and therefore are rejected under similar rationale.

Claim 25 and 26 are rejected under the same rationale as claim 1.

Claims 5, 9, 12, 19 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Robertson et al. ("Robertson", US 6,486,895), Ishida (U.S. Pat. No. 5,684,969), and Gounares et

al. ("Gounares", US 6,681,370).

As per claim 5, while Robertson and Ishida teach the information processing apparatus

according to claim 1 wherein said holding means holds in an executable manner a plurality of

different data processing means specific to said content items of different content type of the

information object, each data processing means including corresponding one of said intermediate

data generating means for generating a piece of intermediate data for a content type of a

particular content items of the information object, corresponding one of said display image

generating means, corresponding content data capturing means specific to said content type of

the particular content item of the information object for capturing content data of said particular

content type of the content item of the information object ("Robertson", FIG.2, step 202,

generate page objects for each web page, col.5, lines 50-52). Robertson and Ishida do not

specifically teach a data deleting means specific to content type of the particular content item of

the information object for deleting generated piece of intermediate data in a said memory.

Gounares teaches a method of information synchronization, wherein a data deleting means

specific to content type for deleting generated data in a data memory (col.15, lines 35-41,

deleting data content). It would have been obvious to an artisan at the time of the invention to

combine Gounares' teaching with the apparatus of Robertson and Ishida because it allows for

flexibility by providing document change and update capabilities.

As per claim 9, Robertson and Ishida teach the information processing apparatus

according to claim 1, comprises managing data for a plurality of information objects (FIG.1,

col.4, lines 50-52, *internal memory*), and means for assigning display priorities to respective

ones of said plurality of information objects (col.7, lines 37-60, *display priority indicated by*

page sequence); said first means comparing said display priority of a particular information

object with a predetermined threshold to thereby determine whether to generate or renew pieces

of intermediate data of said particular information object, said first means causing corresponding

one of said intermediate data generating means to generate or renew said pieces of intermediate

data of said particular information object when the display priority of said particular information

object is higher than the predetermined threshold (col.5, lines 12-21, *predetermined context*

dependent); Robertson and Ishida do not specifically teach a data deleting means for deleting

generated data in a data memory. Gounares teaches said first means causing corresponding one

of said data deleting means to delete said intermediate data of said particular information object

in said memory when the display priority of said particular information object is lower than a

predetermined threshold; said first means deleting the managing data of said particular

information object in said memory when the display priority of said particular information object

is lower than a predetermined threshold (col.15, lines 35-41, *deleting data content*). It would

have been obvious to an artisan at the time of the invention to combine Gounares' teaching with

the apparatus of Robertson and Ishida because it allows for flexibility by providing document

change and update capabilities.

As per claim 12, Robertson and Ishida teach the information processing apparatus further

comprising: a memory region of said memory for storing therein display data including

intermediate data for displaying said plurality of information objects (FIG.1, col.4, lines 50-52,

internal memory), but do not teach a memory managing means for deleting data in memory

region. However, Gounares teaches memory managing means for detecting an amount of said

memory region occupied by said display data and time-sequentially deleting at least part of

intermediate data in said memory region which has not been used for display image generation

for the longest time (col. 15, lines 35-41, *deleting data content*). It would have been obvious to

an artisan at the time of the invention to combine Gounares' teaching with the apparatus of

Robertson and Ishida because it allows for flexibility by providing document change and update

capabilities.

Claim 19 is similar to claim 5 and therefore is rejected under similar rationale.

Claim 23 is similar to claim 12 and therefore is rejected under similar rationale.

Response to Arguments

Applicant's arguments with respect to the amendment have been considered but are moot

in view of the new ground(s) of rejection.

Inquiries

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Thanh T. Vu whose telephone number is (571) 272-4073. The

examiner can normally be reached on Mon-Thur and every other Fri 7:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Kristine L. Kincaid can be reached on (571) 272-4063. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

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system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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